



ACQUISITION

THE UNDER SECRETARY OF DEFENSE
WASHINGTON, DC 20301

01 NOV 1991

MEMORANDUM FOR DIRECTOR, STRATEGIC DEFENSE INITIATIVE
ORGANIZATION
CHAIRMAN STRATEGIC SYSTEMS COMMITTEE

SUBJECT: Global Protection Against Limited Strikes (GPALS) Management Strategy

The attached White Paper on GPALS Acquisition Management is approved. It will be used to amplify the guidance contained in the September 20, 1991 Acquisition Decision Memorandum.


Don Yockey

Attachment:

GPALS White Paper

cc: DAB Members

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WHITE PAPER

GPALS ACQUISITION MANAGEMENT STRATEGY

1. OVERALL APPROACH

A. Purpose

This paper describes specifics of the OSD oversight process for the acquisition of the Global Protection Against Limited Strikes (GPALS) system.

B. Overview and Segment/Element Status

At the July 12 SSC/CSC Review, the SSC/CSC agreed to examine a GPALS oversight approach of managing GPALS by means of groupings. SDIO manages the GPALS program by segments. The segments are: Global Missile Defense (GMD), National Missile Defense (NMD), and Theater Missile Defense (TMD). The committees, working with SDIO, developed an oversight approach based on six systems (five weapons systems plus GPALS System/BMC³) -- each of which will be considered Major Defense Acquisition Programs (MDAPs) -- that will be baselined and submitted for DAB approval. The five MDAP weapon systems are: GMD System (GMDS), NMD System (NMDS), Upper Tier Theater Missile Defense System (UTTMDS), Corps SAM, and Patriot. The total GPALS architecture consists of the six MDAPs, which will address the full Ballistic Missile Defense protection mission for up to 200 RVs, including theater defenses and the associated C3 to permit the five weapon systems to work together for total mission performance.

MDAP status with respect to Milestone approval is as follows. GMDS, NMDS, and GPALS System/BMC³ are all considered past MS I and in Dem/Val. GPALS System/BMC³ is past MS I by virtue of the SDI Phase I MS I approved in

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September 1987. GMDS is past MS I by virtue of the SDI MS I in September 1987. NMDS is past MS I by virtue of the SDS Phase I MS I approved in September 1987 and GBR MS I approved in June 1990. Two elements, however, need special reviews. BE (now in concept exploration) represents such a change from its predecessor, SSTs, that it must undergo an SSC review before award of Dem/Val contracts. E²I, which was not included in the Phase I MS I, must also undergo a separate SSC review before award of Dem/Val contracts. The Patriot is past MS III and further TMD improvements may be subject to MS IV approval, depending on their scope. UTTMDS and Corps SAM are both prior to MS I.

The current status of MDAP baselines is as follows. The initial GMDS baseline was approved by USD(A) in May 1991 in the form of the initial BP concept baseline. Patriot already has a baseline approved by USD(A), and that will be updated as required to reflect TMD requirements. A concept baseline for Corps SAM will be prepared for presentation to the DAB in FY94. Baselines for GPALS System/BMC³, NMDS, GMDS, and UTTMDS will be submitted for approval at the December 1991 DAB and the UTTMDS (initial elements) Milestone I review.

Consistent with six baselines, six integrated DAES reports will be prepared by SDIO and provided to USD(A). A single GPALS SAR has been submitted for the entire system. SARs for all MDAPs are planned (Patriot already has a SAR). The DAES Report mechanism will provide the means for element-level detail to be visible to USD(A).

This management approach will be used for each of the relevant MDAPs until that MDAP's Milestone II. The management approach will be revisited prior to Milestone II.

C. Definitions Of Key Terms

A segment (GMD, NMD, TMD) provides stand-alone BMD protection mission capability. Within a segment, one or more systems consisting of elements provide military capability that contributes to the segment mission. Brilliant Pebbles (BP) is the single system (and element) currently in the GMD segment along with its embedded BM/C³. The NMD segment has five elements during Dem/Val: E²I and GBI interceptors and BE, GBR-T, and GSTS sensors, as well as embedded BM/C³. The TMD segment consists of three MDAPs: Patriot and Corps SAM, which are dealt with as entities; and UTTMDS, an MDAP which currently includes only two major elements -- the THAAD interceptor and the TMD-GBR.

2. REVIEW PROCESS AND REPORTING

A. Introduction

The GPALS decision/review process is specifically designed to support the DAE's needs to make informed decisions and OSD's need to perform oversight. The decision authority for all milestone decisions associated with the GPALS program rests with the Defense Acquisition Executive (DAE). Milestone decisions will be made at the MDAP level. MDAP milestone decisions will provide approval for the MDAP to proceed into the next phase of development, as well as for individual elements brought forward as part of the MDAP.

The decision/review process will be conducted in accordance with DoDD 5000.1/DoDI 5000.2 policies and procedures. An acquisition program baseline (APB) will be prepared for the six GPALS MDAPs and submitted by the SDIAE to the DAE for approval. These baselines will be considered "contracts" between the DAE and SDIAE. The GPALS System/BMC³ APB will contain performance

measures describing the overall GPALS system goals for negation of the worldwide ballistic missile threat; performance measures describing the capabilities of the GPALS common BM/C³ will also be included. The NMDS APB will contain performance measures describing the capability of the NMD system to protect the continental United States (CONUS), Alaska, and Hawaii against ballistic missile attack. The GMDS APB will contain performance measures describing the capability of BP to perform boost, post-boost, and midcourse intercepts of ballistic missiles launched worldwide. The UTTMDS APB will contain performance measures describing the capability of a theater missile defense system to acquire, track, and intercept theater ballistic missiles. The Corps SAM APB (to be provided at the FY94 Milestone I review) will contain performance measures describing the capability of Corps SAM to acquire, track, and intercept selected airbreathing and ballistic missile threats. Patriot is an existing Army component acquisition program with an approved APB.

At the element level within NMDS and UTTMDS, provisional performance criteria (PPCs) will be prepared by the SDIAE to describe element performance goals and thresholds. PPCs are "contracts" between the SDIAE and the SAEs. PPCs will be recorded in and tracked by DAES and will be approved with the MDAP baselines at the December 91 DAB. The SDIAE will hold MDAP managers accountable for meeting the conditions of MDAP baselines, and Element Program Managers (PMs) will be held accountable by the SDIAE for meeting their PPCs. As the elements mature, the PPCs will develop into baseline criteria.

The Defense Acquisition Executive Summary (DAES) reporting system will be used to report the status of GPALS programs and contracts. For each of

the six GPALS MDAPS, a DAES Report will be prepared by the responsible SDIO MDAP manager that describes the status of the MDAP and all of the MDAP elements. Each quarter, the program managers for each element within the six MDAPs will forward assessments and comments through their acquisition chain of command summarizing the status of the element programs to the responsible MDAP managers; these assessments and comments will be included verbatim in Format 12 following the display of the element PPCs in the six MDAP DAES reports submitted to the USD(A). Submission of the MDAP DAES reports will begin for each MDAP the first full quarter following approval by the USD (A) of the MDAP baseline.

B. DAB Milestone Decisions/Reviews

DAB milestone decisions for the six MDAPs are event driven and will be scheduled when the program has progressed sufficiently to meet the minimum required accomplishments for the particular phase, IAW DoDI 5000.2. As stated previously, the MDAP milestone will cover those supporting elements that combine to provide the defined military capability.

Demonstration and validation (dem/val) exit criteria for the initial elements of UTTMDS will be presented for approval by the USD(A) at the UTTMDS Milestone I review scheduled in December 1991. Dem/val exit criteria for each of the other GPALS MDAPs will be established as soon as practical (preferably, initial dem/val exit criteria for NMDS and GMDS should be provided at the December 1991 GPALS DAB review), and no later than two years prior to the Milestone II review for each MDAP; these exit criteria will be approved by the USD(A). It is possible that the dem/val exit criteria may include element-level, hardware specific information.

An approval to proceed through Milestone II at the MDAP Level would also include approval for its elements to proceed into the engineering and manufacturing development (EMD) phase. Elements will not proceed until an associated MDAP milestone review is conducted. The SDIAE will recommend readiness for a milestone decision review, and the DAE will make the final milestone decision. OSD will also determine when periodic or special committee or DAB reviews are required. Management responsibility and execution will be a special emphasis topic at all DAB reviews. The current schedule for milestone decisions is provided in Figure 1.

During the course of GPALS development, it is anticipated that some elements may lag or may be added to an MDAP to enhance its capability or to reduce risk or cost. Should an element lag, the lagging element will be presented in a system context at a separate MDAP level Milestone review (MS IIA for example) prior to any implementing contract action. If an element lag prevents the achievement of operational or performance requirements, the MS review shall be delayed until the deficiency is redressed.

C. Provisional Performance Criteria (PPCs)

The PPCs required for elements will fulfill a purpose at the element level similar to the six baselines at the MDAP level. The PPC will contain technical and operational performance information as well as cost and schedule information. The major difference is that the PPCs will not fall under the same procedures for reporting and approval as do MDAP baselines. They will, however, provide the mechanism to establish element "contracts" between the SDIAE and the Service AEs and enable OSD to quickly flag problems and track program progress, issues, and issue resolution. They will also serve to help guide the preparation of annual Program Management Agreements (PMAs).

	Milestone I	Periodic Reviews	Milestone II	Milestone III
<u>GPALS System/BMC3</u>	Sept 87	Dec 91	Mar 95	May 00
<u>NMD</u>	Sept 87	Dec 91	Nov 96	May 00
BE	—	Dec 91/Jul 92	Nov 96	May 00
GBR-T	July 90	Dec 91	Nov 96	May 00
GSTS	Sept 87	Dec 91	Nov 96	May 00
E ₂ I	—	Dec 91 / Nov 95 (downselect)	Nov 96	May 00
GBI	Sept 87	Dec 91 / Nov 95 (downselect)	Nov 96	May 00
<u>GMD</u>	Sept 87	Dec 91	Mar 95	May 00
BP	Sept 87	Dec 91	Mar 95	May 00
<u>TMD</u>				
Patriot	May 67	(MS IV Jan 93)	Mar 72	IIIa - Sep 80 IIIb - Apr 82
UTTMDS	Dec 91 (THAAD/TMD -GMR)		Sept 94	Nov 98
Corps SAM	Nov 93		Dec 97	May 00

Figure 1. DAB & DAB Committee Reviews

D. Breaches/Deviations

Breaches to baselines at the MDAP level will follow the procedures prescribed in DoDI 5000.2. Cost, schedule, and performance breach criteria will be developed by the decision authority (DAE) for the MDAPs when in the Dem/Val Phase. In the case of an anticipated MDAP breach, an Exception DAES report will be prepared by the MDAP manager and forwarded to the DAE

through the SDIAE. If an actual breach occurs, a System Deviation Report will be prepared and forwarded to the SDIAE for action. The SDIAE will review and submit the report to the DAE within 45 days. At that time the SDIAE will explain the cause of the breach and identify corrective recovery plans.

Deviations at the element level will be modeled after DoDI 5000.2 and will be based on the PPC and guidelines established by the SDIAE. In the case of an anticipated deviation, the Element PM will prepare an Exception Report (similar to an Exception DAES Report) and forward it through his Service Chain of Command to the SDIAE. In the case of an actual deviation, the Element PM will prepare an Element Deviation Report (similar to a System Deviation Report) and forward it to the executing AE and the SDIAE, and it will be included in the DAES report. If the element deviation causes a parent MDAP deviation, MDAP breach/deviation rules apply.

E. Program Execution

The GPALS program will continue to be executed under the provisions outlined in the current Memoranda of Agreement (MOAs) between SDIO and the Air Force and SDIO and the Army. Further, the MOA recently signed by SDIO and the Army concerning TMD will be used to define execution responsibilities and interactions on that segment. An MOA between SDIO and the Navy will be implemented immediately upon assignment of element execution responsibility to the Navy.

The acquisition management network consistent with the MOAs for GPALS is shown in Figure 2. The key guidance and direction document is the Program Management Agreement (PMA) that is prepared by SDIO and forwarded through the Service AEs to Element Program Offices for execution.

PMAs prepared annually contain specific funding allocations as well as detailed guidance covering the scope and anticipated accomplishments of the element activities in support of the segments and GPALS.

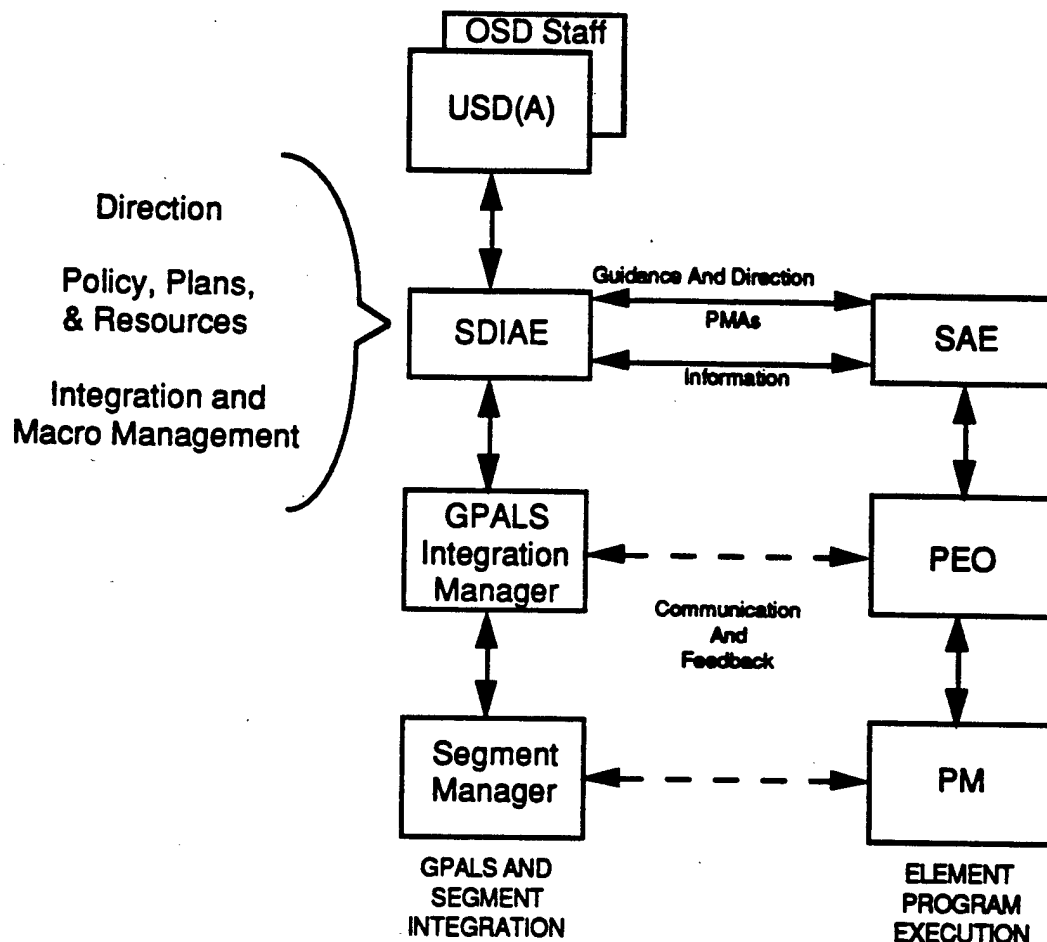


Figure 2 GPALS Acquisition Management Structure

To ensure that this management structure continues to operate effectively, it is anticipated that annexes to the MOAs will be required to provide more detailed agreements between SDIO and the Executing Agents. These annexes will provide unifying guidance concerning such topics as integrated logistics support concepts, risk management, contract strategies, fielding plans, and manpower.

Furthermore, the Director, SDIO shall prepare plans that detail the transition of each MDAP into development and subsequent production and deployment. Each transition plan will specifically address the Service responsibilities for each affected element and the timing of any transfer of acquisition management authority. The transition plan will be coordinated with affected services and presented to the USD(A) for approval one year prior to each MDAP's Milestone II.

F. Manpower

The manpower requirements for GPALS and its impact on Service manpower levels, especially in light of the Congressionally directed manpower drawdown, create the need to ensure that manpower is an integral part of the systems development process at all levels. The segment approach provides improved opportunities for manpower savings through such factors as commonality of hardware, logistic and depot support, operations, and maintenance and by minimizing duplication. In addition, manpower must be considered a design factor as the elements move through Dem/Val towards EMD. Initial manpower assessments will be provided in December 1991 in the Cost Analysis Requirements Documents (CARDs), and manpower updates are to be included in the MDAP DAES reports. Manpower issues will be a topic covered at all periodic DAB reviews and at Milestone II. Initial and preliminary manpower objectives and thresholds will appear in MDAP baselines and will be provided for each MDAP element as PPCs appearing in the MDAP DAES reports. The baseline and PPC values for manpower will be consistent with the manpower estimates provided initially in the GPALS Cost Analysis Requirements Documents (CARDs) developed in preparation for the December 1991 DAB

GPALS review. MDAP-level Manpower Estimate Reports (MERs) will be prepared by the MDAP managers, supported by element PM manpower inputs (similar in concept to TEMP preparation).

3. DOCUMENTATION

A. Overview

Documentation planning for SDIO acquisition management is based on two primary precepts:

- 1) Documentation at the MDAP level will be in accordance with DoDI 5000.2
- 2) Element Program Offices will be required to provide adequate information to enable necessary oversight by OSD and to provide the data needed to generate MDAP documentation.

MDAP-level documents may be compilations of element details but will typically address commonality and unique integration issues as elements are combined. Certain MDAP reports (e.g., TEMP, ICE) will be capstones and contain equivalent element level reports as annexes. Reports generated at the MDAP level outside of DAB requirements, such as the DAES and SAR, will contain sufficient data at the element level to identify key events, changes, and impacts. A specific discussion of the current status/planned content on key documents follows. A summary of the documentation and what is to be delivered in support of the December 1991 DAB is provided in Figure 3. The shaded part of Figure 3 reflects those documents that are specific deliverables for the December 91 DAB.

Document Program Level	GPALS SYSTEM STAR	MNS	ORD	IPS	TEMP	APB	PLCCE*	ICE	COEA
GPALS System Plus BM/C3 (BMC3 due 3/92)				X 12/95	X	X	X	X	X 06/92
GMD	● 3/92	✓	X		●	X	X	X	X
BP	●		**	✓	● 6/92	✓		X	✓
NMD	● 3/92	✓	X	X 6/92	●	✓	X	X	X
BE	●		**	✓	● 6/92	✓		X	✓
GSTS	●		**	✓	● 6/92	✓		X	✓
E ² I	●		**	✓	● 6/92	✓		X	✓
GBI	●		**	✓	● 6/92	✓		X	✓
GBR-T	●		**	✓	● 6/92	✓		X	✓
TMD					●				
UTTMS			X						
Sensor Interceptor BM/C3									
Patriot Upgrades	● 01/93		X	X 01/93	● 01/93	X	X	X	X
Corps SAM	● 01/93		X	X 11/93	● 11/93	X	X	X	X

NOTES: X = Document Shade = Nov Delivery * = Full Report in Annex Or Appendices to Basic Document (Anticipate Tailoring) ✓ = Covered in Basic Document
Date = Proposed Delivery * = Based On Evaluation Of CARDS ** = Individual ORDs for elements are TBD

Figure 3. SDIO Acquisition Management Documentation

B. Specific Document Planning

1. Mission Need Statement (MNS). A GPALS MNS is not anticipated. The VCJCS has determined that the combination of (1) the SDS Phase I MNS and JCS requirements and (2) the TMD MNS are sufficient for GPALS MNS purposes.

2. Operational Requirement Documents (ORD). The Strategic Defense System (SDS) Phase I ORD which includes specific, quantitative requirements against accidental/unauthorized attacks by strategic ballistic missiles, has been validated by the JROC. These specific requirements constitute the strategic part of the GPALS requirements and will be met by a combination of the National Missile Defense (NMD) system and the Global Missile Defense (GMD) system. A special study group, established to recommend to the JROC an organizational structure for TMD requirements determination, is addressing how TMD ORDs and MNSs will be prepared to support milestone decisions.

Each MDAP will have an associated ORD, prepared as appropriate by a designated service or by a Joint Staff tasked command. These ORDs will provide the basis for the corresponding MDAP baselines. For milestone reviews, or at other times as requested by the DAE, the JROC will review MDAP ORDs, grouped so as to include all ORDs that together satisfy either the strategic accidental/unauthorized MNS or the TMD MNS, and provide the DAE with an assessment of whether the reviewed ORDs and the associated MDAP APBs are consistent with the respective MNS.

3. System Threat Assessment Report (STAR). A single capstone STAR will be developed for the GPALS System. This capstone STAR will include a separate STAR Annex for each of the six GPALS MDAPs (GPALS System Plus

BM/C³, GMDS, NMDS, UTTMDS, Patriot, and Corps SAM) in accordance with DoDI 5000.2(M). In keeping with the requirement for a STAR for each MDAP stipulated by DoD 5000.2M, these STAR Annexes will contain individual sections where appropriate for each element within the respective MDAP.

4. Integrated Program Summary (IPS), and Integrated Program Assessments (IPAs). The IPS, generated by SDIO, and the IPAs, generated by SSC/CSC, will be created for each of the six MDAPs (GMDS, NMDS, UTTMDS Patriot, Corps SAM, and GPALS System/BMC³). An IPS will be required (via the PMA) from the Executing Agent of each element that supports an MDAP scheduled for milestone review. IPS inputs from the element level will be scheduled to allow integration into the MDAP level IPSs, and permit consolidation of risk assessments, cost drivers, tradeoffs, and similar information.

5. Acquisition Program Baseline (APB). The APB will be established for the GPALS System/BMC³, NMDS, GMDS, UTTMDS, Patriot, and Corps SAM with some tailoring planned for items that are not applicable at the MDAP level (e.g., CDR complete date, unit cost, etc.). Baselines will be focused on parameters resulting from the integration of elements into a military capability. Upon approval, subsequent breaches will be reported using the procedures outlined previously in this document. Provisional Performance Criteria (PPC) will be established at the element level for MDAPs with multiple elements and be used to track program progress and measure an element's readiness to support an MDAP milestone review.

6. Test and Evaluation Master Plans (TEMPs). A DoD 5000.2-compliant TEMP(s) will be generated for the GPALS System. The TEMP will be comprised of a GPALS Capstone TEMP, and TMD, GMD and NMD segment annexes and Element appendices. The GPALS Capstone, NMD Annex and the

GMD Annex will be formal TEMPs and cover their corresponding MDAPs. The TMD Segment Annex will serve as a "capstone" document to integrate the TEMP appendices for the TMD MDAPs: UTTMDS, Patriot and Corps SAM. The Capstone TEMP with segment annexes will be provided for the December 1991 DAB review. A UTTMDS appendix will be provided to support the Milestone I review. The GBI, GSTS, GBR, BE, and E2I element appendices will be provided in FY 92.

7. Program Life Cycle Cost Estimate (PLCCE). PLCCE will be established and presented for each of the six MDAPS; a CARD, a program manager's estimate, and an independent cost estimate will be prepared for each baseline. In addition, the CAIG will review and analyze a CARD, a program manager's estimate, and an independent cost estimate for each element; similar documentation will be submitted for the collection of functions not included in any element but needed to complete a MDAP. Funding lines consistent with the latest Future Year Defense Program (FYDP) will be presented for each element.

8. Cost and Operational Effectiveness Analysis (COEAs). Original Milestone I COEAs will be prepared for UTTMDS and Corps SAM. The ASD (PA&E) issued guidance to the Director, SDIO for the UTTMDS COEA (formerly the THAAD COEA) on July 29, 1991. The ASD (PA&E) has also prepared guidance for the GPALs COEA, and the USD(A) transmitted this guidance to the Director, SDIO on September 20, 1991.

9. Independent Cost Estimate (ICE). ICEs will be required at the element and MDAP level for submittal to the CAIG. When the executing agent is a military department the ICE will be the responsibility of that department's normal independent cost agency. For any other Executing Agent, assignment of responsibility for the ICE will require approval of the Chairman, CAIG.

10. Joint Requirements Oversight Council Assessment (JROCA). The JROC will conduct a review of the GPALS MDAPs consistent with DoDI 5000.2 requirements prior to each milestone DAB review and at other times as requested by USD (A).

11. Manpower Estimate Report (MER). Not required until MS II, the planned approach for submitting manpower resource inputs was previously discussed. Development and approval of MERs by EAs will follow their normal process.

12. Selected Acquisition Reports (SARs). SARs in accordance with DoDI 5000.2 will be prepared for all MDAPs.

Appendix A

Defense Acquisition Executive Summary

Summary

This appendix presents Defense Acquisition Executive Summary (DAES) instructions which amplify those in DoD 5000.2/M and will be used to guide preparation of initial and subsequent DAES. A sample NMD DAES will be provided before the committee review in support of the December 91 DAB. Lessons learned from this sample may result in approved modifications to these instructions to facilitate MDAP DAES preparation.

The Defense Acquisition Executive Summary (DAES) Report described in DoD 5000.2/M is designed to provide, on a regular and systematic basis, advance indications of both potential and actual program problems before they become significant. SDIO will use the approved OSD software package known as the Consolidated Acquisition Reporting System (CARS) to prepare and submit DAES reports. Six separate and complete DAES reports will be submitted by SDIO, for: the Global Missile Defense (GMD) Major Defense Acquisition Program (MDAP), National Missile Defense Segment (NMD) MDAP, GPALS System/BMC3 MDAP, Upper Tier Theater Missile Defense System (UTTMDS) MDAP, Corps SAM MDAP, and Patriot MDAP. The six GPALS DAES reports will be submitted to the USD(A) on a quarterly schedule with initial submissions in the first quarter following each MDAP's baseline approval. GPALS DAES reports will be discussed at OSD DAES meetings on a schedule determined by USD(A). Any DAES report that generates issues or concerns in OSD can become the basis for an agenda item at the next OSD DAES meeting, whether or not it was scheduled to be reviewed in the normal USD(A) cycle.

DAES Preparation Responsibility

Eleven of the twelve sections of each DAES are prepared by the SDIO MDAP Manager. The twelfth section is prepared by the GPALS Integration Manager, and by the SDIAE, and it contains their assessments and perspectives. SDIO MDAP Manager assessments and comments will be displayed in Formats 10 and 11 of the DAES report. Element program manager, Service AE and Service PEO assessments and comments will appear in Format 12 immediately following the display of PPCs for each element. These assessments and comments will be provided each quarter that an MDAP DAES report is submitted. (Also, to the extent that comments regarding PPC changes are made by the SDIAE, the GPALS Integration Manager, and the MDAP Manager in Format 12, Element Program Manager, PEO and SAE comments regarding PPC changes will appear in Format 12.)

The MDAP Manager has full responsibility for assessing and reporting the status of the MDAP, including the contribution of each element to the MDAP status. The six MDAP DAES reports submitted to USD(A) by the SDIO MDAP Managers will be fully consistent with the six MDAP baselines approved by the USD(A). In addition to baseline information, the MDAP DAES reports will include the element-level data necessary for USD(A) to understand the element acquisition programs within each MDAP, but excluded from the MDAP baseline. Thus, Provisional Performance Criteria (PPC), including numerical objectives and thresholds, will be displayed in Format 12 of the DAES report for each element within MDAPs. The PPCs will comprise the key measures describing the expected performance of the deployed MDAP elements and will initially include preliminary manpower objectives and thresholds. The initial PPCs will be submitted to the USD(A) for approval at the December 1991 DAB.

Initial MDAP DAES Submissions

Based on 5000.2/M guidance, the first DAES report is provided to USD(A) in the first quarter following approval of the program's baseline. The only baseline currently approved by USD(A) is the initial BP baseline for the GMD MDAP. A proposed NMD baseline will be presented for consideration at the December 1991 DAB, and a sample DAES for the NMD MDAP will be prepared for the Dec 1991 DAB, but it will not be introduced into the official DAES system. Based on DAB and USD(A) approval of the NMD MDAP Baseline, the NMD Sample DAES will be the basis for the first NMD DAES submitted into the DAES reporting system in January 1992 (as a 2QFY92 submission). As an existing program, Patriot already provides a DAES Report. If BMD Patriot upgrades are pursued in the future, the DAES will reflect the progress of the upgrades in the quarter following the addition of the upgrades to the baseline. Approval of the UTTMDS and GPALS System/BMC3 baselines by USD(A) following the December DAB, will result in DAES Reports for these MDAPs prepared and submitted in January 1992. If a Corps SAM MDAP baseline is presented and approved at a later DAB, a Corps SAM DAES report will be submitted in the first quarter following baseline approval by USD(A).

Exception and Deviation Reports

In addition to regular quarterly DAES Reports, three types of out-of-cycle exception reports and program deviation reports will be submitted when appropriate and in full compliance with 5000.2/M.

An out-of-cycle exception report will be submitted when the MDAP Manager has cause to believe that a baseline deviation could occur if a problem is left untreated. The MDAP Manager will immediately submit an updated DAES Format 10 (Program Assessment) and Format 11 (MDAP Manager Comments, including element PM, PEO and SAE comments if the possible deviation involves

one or more of the elements within the MDAP), and a blank Format 12 (GPALS Integration Manager and SDIAE Comments) to the GPALS Integration Manager. The Integration Manager and SDIAE will add their comments. The DAES exception report, made up of Format 10, 11, 12 will immediately be forwarded from the GPALS Integration Manager/SDIAE to USD(A).

An out-of-Cycle exception report will be submitted when the MDAP Manager has reasonable cause to believe that a unit cost breach has occurred or will occur. The MDAP Manager will prepare and submit updated Format 2 (Program Background Data) and Format 6 & 7 (Contract Cost Information) to the GPALS Integration Manager and the SDIAE. The determination of a unit cost breach will be based on average element unit costs provided as PPCs in Format 12. The exception report, although not submitted formally to USD(A), will be included as additional information in Format 12 of the DAES report for the MDAP containing the element for which the cost breach is anticipated (or has occurred).

The final exception report is submission of Format 2 containing the Annual POM/BES Program Funding Summary. The MDAP Manager will prepare and submit Format 2 following submission of the SDIO POM/BES submissions in accordance with the schedule established by USD(A).

A program deviation report will be prepared by the MDAP Manager when he believes that an MDAP baseline breach will or has occurred. The report is in memorandum form and addresses the MDAP Baseline parameters that cannot be achieved, including reasons why they cannot be achieved and proposed resolutions of associated problems. A proposed MDAP Baseline change showing the last approved Baseline value, the proposed new value, and the reason for change and its impact on the MDAP will be submitted with the report memorandum when the MDAP Manager determines that the breach cannot be

restored or recovered. The report and revised baseline change format will be submitted by the MDAP Manager to the GPALS Integration Manager and the SDIAE. The SDIAE will form a team to review the breach and, within 45 days, will notify USD(A) of the breach, the reason for the breach, and recommended corrective action.

Administration of MDAP DAES Reporting

In accordance with 5000.2/M, the SDIAE appoints the GPALS Integration Manager as the SDIO Focal Point for DAES reporting, supported by the SDIO Deputy for Program Operations for DAES maintenance and production. The GPALS Integration Manager and the SDIAE will ensure that each MDAP DAES provides the USD(A) an independent assessment of MDAP status by the MDAP Manager and Element status by the SAE, PEO and Element Program Manager. Element Program Managers will provide assessments and comments through their acquisition chain of command regarding their Element programs (only) to the MDAP Managers on a quarterly basis.

Specific discussion of the information to be included in each of the DAES report formats follows.

Format 1 - Cover Sheet

The data on the cover sheet will be provided by the MDAP Manager. It includes the MDAP title, DoD component (SDIO), the name of the MDAP Manager, the DAES point of contact within SDIO for use of the CARS software, and the overall GPALS Integration Manager's name (in the PEO line on the cover sheet).

Format 2 - Program Descriptive Data

The data in Format 2 will be provided by the MDAP Manager and in coordination with SDIO offices where appropriate. Mission and description data will be taken from internal MDAP program documentation, the SDS Phase I

MNS and TMD MNS, the ORD, and other appropriate sources. The description will include identification of individual elements making up the MDAP, interactions with other MDAPS, and references to key MDAP highlights such as contract awards, tests, and other events since the last DAES report. Also included are data for tracking to the budget showing RDT&E Program Element (PE) information, procurement annex line items (PALI), MILCON PEs, and O&M PEs. Space for comments by the MDAP Manager concerning budget data is provided. Space for comments by the Element Program Managers, PEOs and SAEs concerning budget data will be provided in Format 12, if necessary. Discussions of applicable international cooperative programs, when applicable to an MDAP, are also included in Format 2.

Format 3 - Program Funding Summary by Appropriation

The MDAP Manager will provide the appropriation data in this section, in cooperation with SDIO Program Operations (SDIO/PO).

Format 4 - Program Cost Estimates

The MDAP Manager will report an independent cost estimate for the MDAP, plus his own MDAP Manager's cost estimate. He will coordinate with SDIO/PO to obtain independent cost estimate information.

Format 5 - Program and Contract Cost Information By Appropriation

The MDAP Manager, with inputs from the Executing Agents and SDIO/PO and SDIO Contracts, will provide element and MDAP contract cost information at a summary level.

Format 6 - Supplemental Contract Cost Information

The MDAP Manager, with inputs from the Executing Agents and SDIO/PO and SDIO Contracts, will provide additional information on the element and MDAP contract costs summarized in Format 5. This information includes basic contract data including authorized unpriced work, contract target and ceiling

prices, completion dates, critical milestones, and CPR, C/SSR, and CFSR data with variance analyses.

Format 7 - Program Baseline Performance Characteristics

The MDAP Manager will report the approved baseline performance and cost data in this format. Objectives, thresholds, and the MDAP Manager's current estimate will be shown.

Format 8 - Program Schedule Milestones

The MDAP Manager will report the key schedule milestones, including those shown in the MDAP baseline.

Format 9 - Program Baseline Deliveries

The MDAP Manager will provide procurement delivery information (i.e. radars, missiles, etc.) when an MDAP has an awarded production contract.

Format 10 - Assessments

The MDAP Manager provides RED-YELLOW-GREEN assessments of the MDAP for nine Program Assessment Indicators: Performance Characteristics, T&E, Logistics Requirements and Readiness Objectives, Cost, Funding, Schedule, Contracts, Production, Management Structure. An assessment, for example, a YELLOW for MDAP schedule, may be an advisory assessment, meaning that the schedule has not yet gone YELLOW but that it has a potential to do so. The MDAP Manager provides comments on these assessments in Format 11 of the DAES.

In making his assessments, the MDAP Manager relies on all relevant MDAP program information, including element level information. Consistent with 5000.2/M, the "Management Structure" assessment indicator is for the MDAP Manager's consideration and assessment of program impacts that do not fit into the other eight rating categories. This can include problems of

interrelated segments, manpower and training issues, national security policy issues such as treaty considerations, and other topics.

Format 11 - MDAP Manager's Comments

In this section, MDAP Managers will provide comments explaining their program assessment ratings displayed in Format 10. In developing comments and assessments, the MDAP Managers (and the Element Program Managers in Format 12) will comply fully with DAES reporting requirements specified in DoDM 5000.2-M. Comments will be provided explaining all program ratings, advisory issues will be discussed, and the status of corrective actions taken since the last DAES report will be documented. Pending and proposed baseline changes and PPC changes affecting the MDAP baseline will be explained, and the risk associated with each change will be assessed.

Format 12 - GPALS Integration Manager and SDIAE Comments

The GPALS Integration Manager and SDIAE will provide comments, assessments, and perspectives on the MDAP. Comments will focus on changes in the relative level of risk associated with the MDAP, the significance of the problems reported by the MDAP Manager, and the MDAP Manager's proposed corrective actions. Comments will also be provided on any pending or proposed MDAP Baseline changes. Changes to the element level PPC proposed by the MDAP Manager will be approved or disapproved by SDIAE and Integration Manager for inclusion in proposed changes to the PMAs that fund executing agents.

PPC threshold deviations and PPC changes will not be subject to program deviation reporting; hence, a full discussion of PPC deviations and changes will be provided in Formats 11 (when they cause MDAP baseline breaches) and 12. The initial set of PPCs will be approved by the USD(A) at the December 1991

DAB. Subsequently, PPC changes and notification of PPC deviations will be forwarded by the MDAP and Element Program Managers through their acquisition chain of command for review and approval by the GPALS Integration Manager and the SDIAE. If a change to a PPC or a PPC deviation will cause an MDAP baseline breach, an Exception Report and (or) a Program Deviation Report will be prepared by the MDAP Manager with full participation by the affected Element Program Manager and submitted through the GPALS Integration Manager to the USD(A). The GPALS Integration Manager and the SDIAE will comment on PPC changes and breaches in Format 12.